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New species and records of Eurasian and New Guinean Clambidae (Coleoptera, Eucinetidea)

by

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With 3 figures

ABSTRACT

A rich material of Asian and New Guinean Clambidae was studied resulting in the recognition of six new species. From Nepal *Clambus bipartitus* and *C. loeblianus*; from Thailand *C. thai* and *C. burckhardti*; from Borneo *C. borneensis* and from New Guinea *C. szentivanyi*. First clambid records from Pakistan, Afghanistan and Iran provided valuable biogeographical data from the interface areas of the Mediterranean and sub-Himalayan faunas.

INTRODUCTION

Three years after my last report in 1986 a large and interesting material was again received from the Natural History Museum of Geneva (MHNG) mostly collected by the coleopterists of that museum, C. Besuchet, I. Löbl and D. Burckhardt; and a small sample of clambids from the Natural History Museum of Budapest (NHMB). Some duplicates are deposited in the author's collection.

Besides the new species, the first samples of the family from Pakistan, Iran and Afghanistan extend the known distribution areas for a number of species.

The Mediterranean species *Loricaster testaceus* Mulsant and Rey, *Clambus dux* Endrödy-Younga can now be identified as far as Pakistan but apparently do not occur any further to the east. *Clambus pilosellus* Reitter, however, is now known from the Mediterranean to Nepal and Taiwan.

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The widely distributed eastern Palaearctic species *Clambus formosanus* became known also from Pakistan, but apparently does not occur further to the west. Thus the inter-connection and separation of the Mediterranean and south-eastern Palaearctic faunas is indicated by species of different evolutionary lineages of the family.

NEW DISTRIBUTION RECORDS

EURASIA

Loricaster testaceus Mulsant & Rey, 1861: 134

The known range of this small and wingless species of the family has greatly been extended towards the east by specimens recently collected. It was known hitherto from southern Europe, predominantly from the north-eastern Mediterranean and from a single locality at the shores of the Caspian sea (ENDRÖDY-YOUNGA, 1959: 110). Recently specimens were collected in Iran and Pakistan. In this species the named subspecies apparently mark the extremes of a number of clines. The characters of most populations hitherto studied in these morphological clines are usually predictable by their geographical position. Thus more often than not populations have to be marked as transitions between two subspecies. There is no doubt about the specific identity of populations from Turkey, Iran and Pakistan as they fall into the same system of interlinked clines.

L. testaceus atomus Reitter, 1884: 119.

Turkey, Kars, Digor, 1650 m, 15.VI.1986, leg. Besuchet, Löbl, Burckhardt, 1 ex.

— Tunceli, Tunceli-Ovacik, 1100 m, 5.VI.1986, leg. Besuchet, Löbl, Burckhardt, 3 ex.

L. testaceus atomus Reitter/*caspicus* Reitter, 1884: 119.

Iran, Mazanderan, Gol-e-Loweh, 700 m, 37°20'N-55°44'E, 21.VIII.1975, leg. A. Senglet, 1 ex.

— O. de Kayiasar, 36°16'N-53°25'E, 10.VII.1975, leg. A. Senglet, 1 ex.

Pakistan, Swat, Malam Jabba, 2500-600 m, 18.V.1983, leg. Besuchet, Löbl, 1 ex.

— Swat, above Miandam, 2400-500 m, 17.V.1983, leg. Besuchet, Löbl, 1 ex.

Calyptomerus caucasicus Reitter, 1876: 288

Note that the citation of the original description was sometimes incorrect and that the same species is sometimes referred to as *Calyptomerus caucasus* Reitter.

This species was hitherto known only in its type series collected in the Caucasian Mountains in the late 19th century. The present records are from north-eastern Turkey, south of the Caucasians.

Turkey, Artvin, Pirnalli massif du Karkal Dagı, 1600 m, 11.VI.1986, leg. Besuchet, Löbl, Burckhardt, 1 ex.

— Artvin, SW Artvin, 1900 m, 9.VI.1986, leg. Besuchet, Löbl, Burckhardt, 7 ex.

Clambus dux Endrödy-Younga, 1960: 281

This species was described in four geographically discrete subspecies. The distribution areas of these taxa are increasing by new discoveries still without any geographical overlaps or transitional populations. Thus the possibility of distinct species status of the four subspecies remains open.

C. dux dux Endrödy-Younga, 1960: 282.

The species *C. dux* was previously not known from Turkey. The present records of ssp. *dux* extend the distribution area of the subspecies from southern Europa eastwards from the Balkan to Turkey.

Turkey, Kayser: Sultansazligi, 1000 m, 6.V.1978, leg. Besuchet, Löbl. 1♂, 3♀ and 5 further ex.
Artvin, SW Artvin, 1900 m, 9.VI.1986, leg. Besuchet, Löbl, Burckhardt, 1♂.

C. dux proximus Endrödy-Younga, 1960: 284.

The new record extends the distribution of the subspecies from the Caucasus to Afghanistan.

Afghanistan, Kandahar, O. de Kandahar, 31°37'N-65°36'E, 31.VII.1975, leg. A. Senglet, 7♂, 5♀.

C. dux xerxes Endrödy-Younga, 1960: 285.

Distribution of the subspecies has been extended eastward from Iran to Pakistan.

Pakistan, Chitral, Kalas, 1900 m, 28.V.1983, leg. Besuchet, Löbl. 4♂, 5♀ and 6 further ex.
— Chitral, 1500 m, 29.V.1983, leg. Besuchet, Löbl, 9 ex.

Clambus pilosellus Reitter, 1876: 288.

A comparative diagnosis of this species to *C. bipartitus* spec. nov. is provided in the chapter of descriptions.

This species was known from southern Europe, the Caucasus, and the southern Aral (ENDRÖDY-YOUNG, 1960: 267) and subsequently reported from an almost unlikely distance of Taiwan (ENDRÖDY-YOUNGA, 1986: 93). Present records from Turkey and Nepal significantly reduce the gap in the species distribution.

Turkey, Artvin, below Pirnalli massif of Karkal Dagi, 1250 m, 11.VI.1986, leg. Besuchet, Löbl, Burckhardt, 1♂.

E. Nepal, Kosi, valley Induwa Kola, leg. Löbl, Smetana in a total of 8♂ and 22♀ from the following altitudes and dates: 2000 m, 14.IV.1984, 1 ex; 2000 m, 16.IV.1984, 2 ex; 2000-2600 m, 16-18.IV.1984, 24 ex; 2000 m, 18.IV.1984, 2 ex.

— Kosi, 2 km E Mangsingma, 1900 m, 19.IV.1984, leg. Löbl, Smetana, 1 ex.

***Clambus formosanus* Endrödy-Younga, 1960: 273**

This species was originally described in two subspecies, *formosanus* and *japonicus* (ENDRÖDY-YOUNGA, 1960: 273: 74) and later a third, *indicus*, was added (ENDRÖDY-YOUNGA, 1978: 83). The three subspecies can be recognised by the form of aedeagi and had initially distinct distribution areas (see names). With the increasing number of records the morphological distinction between taxa remains largely unchanged but the geographical records are becoming confusing.

C. formosanus formosanus Endrödy-Younga, 1960: 273.

Originally known from Taiwan, later reported from Vietnam (ENDRÖDY-YOUNGA, 1978: 82). It was recently found in Thailand.

Thailand, Khao Yai Nat. Park, 750-850 m, 26.XI-3.XII.1985, leg. Burckhardt, Löbl, 1♂.

— Prov. Chiang Mai, Doi Inthanon, 1780 m, 3.III.1987, leg. P. Schwendinger, 1♀.

— Chiang Mai, Doi Suthep, 1180 m, 1.II.1986, leg. P. Schwendinger, 1♀.

— Same locality, 1400 m, 5.XI.1985, leg. Burckhardt, Löbl, 1♂.

— Chanthaburi, Khao Sabap Nat. Park, 150-300 m, 23-24.XI.1985, leg. Burckhardt, Löbl, 1♀.

C. formosanus japonicus Endrödy-Younga, 1960: 274.

Hitherto only reported from Japan but material has now been studied from Nepal.

Nepal, province Bagmati, Gokarna forest, near Kathmandu, 1400 m, 1.VI.1981, leg. Löbl, Smetana, 1♂, 1♀.

- District Kathmandu, Godawari, 1600 m, 31.III.1984, leg. Löbl, 1 ♀.
- District Kathmandu, Gokarna forest, 1300 m, 20.X.1983, leg. Smetana, Löbl, 1 ♀.

C. formosanus indicus Endrödy-Younga, 1978: 83.

Described from the Haldwani district of India and has been found recently in Pakistan.

- Pakistan, Dir, 1500 m, 20.V.1983, leg. Besuchet, Löbl, 5 ♂, 3 ♀ and 9 further ex.
- Chitra, Lawarai Pass, 2600 m, 23.V.1983, leg. Besuchet, Löbl, 1 ♀.
 - Chitral, Lotkah, 2350 m, 29.V.1983, leg. Besuchet, Löbl, 1 ♀.
 - Swat, Karakar Pass, 1300 m, 19.V.1983, leg. Besuchet, Löbl, 3 ♂, 4 ♀.
 - Swat, Markhuzar, 1300 m, 8.V.1983, leg. Besuchet, Löbl, 4 ex.
 - Same data, but 1200 m, 11.VI.1983, leg. Besuchet, Löbl, 1 ♀.

Clambus ruber Endrödy-Younga, 1986: 103.

This species became known from sub-Himalayan India and Nepal. New localities are listed here for Nepal as well as for Thailand.

- Nepal, Distr. Kathmandu, Phulcoki, 2500 m, 28-29.IV.1984, leg. Löbl, Smetana, 1 ex.
- Same data but 2550 m, 29.IV.1984, 1 ex.
 - Same data but 2650 m, 15.X.1983, leg. Löbl, Smetana, 1 ex.
 - Bagmati Prov., Dobata Ridge, NE Barahbise, 2700 m, 2.V.1981, leg. Löbl, Smetana, 1 ex.
- E. Nepal, Kosi, Chichila, above Ahale, 2200 m, 4.IV.1984, leg. Löbl, Smetana, 3 ex.
- Kosi, forest NE Kuwapani, 2250 m, 24.IV.1984, leg. Löbl, Smetana, 3 ex.
 - Same data, but 2350 m, 5.IV.1984, 3 ex.
 - Kosi, pass NE Mangmaya, 2300 m, 6.IV.1984, leg. Löbl, Smetana, 1 ex.
 - Kosi, ridge, NE Magmaya, 2800 m, 7.IV.1984, leg. Löbl, Smetana, 1 ex.
- Thailand, Chiang Mai, Doi Suthep, 1450 m, 4.XI.1985, leg. Burckhardt, Löbl, 1 ♂.

***Clambus wittmeri* Endrödy-Younga, 1986: 107**

Initially reported from sub-Himalayan India. Its distribution has now been extended to Nepal and Pakistan.

- Nepal, distr. Kathmandu, Godawari, 1600 m, 31.III.1984, leg. Löbl, 1 ♀.
- E. Nepal, Kosi, forest NE Kuwapani, 2350 m, 5.IV.1984, leg. Löbl, Smetana, 1 ♂.
- Pakistan, Hazara, Naran-Kaghan, 2300 m, 2.VI.1983, leg. Besuchet, Löbl, 1 ♂.
- Naran, Hazara, 2500 m, 31.V.1983, leg. Besuchet, Löbl, 1 ♀.

***Clambus bengalensis* Endrödy-Younga, 1986: 111**

This species was known only from W. Bengal, India but recently became known also from eastern Nepal.

- E. Nepal, Kosi, Val. Arun, sws/Nun, 1050 m, 20.IV.1984, leg. Löbl, Smetana, 1 ♂.

NEW GUINEA

***Clambus biroi* Endrödy-Younga, 1959: 92**

This species was hitherto known only by five type specimens collected by L. Biro between 1899 and 1901 in NE New Guinea. The new records are from the same area.

- New Guinea (NE), Baiyer Rivder Sanctuary, 1-5.IX.1969, leg. Dr. J. Balogh, 1 ex.
- Wan, McAdam Park, 18-21.IV.1965, leg. Dr. J. J. Szent-Iványi, 1 ex.

Clambus novaguineensis Endrödy-Younga, 1959: 93

This species was known only by six type specimens collected by L. Biro in north-east New Guinea. The new records are from the same area.

New Guinea (NE), Baiyer River Sanctuary, 1-5.IX.1965, leg. Dr. J. Balogh, 2 ex.

DESCRIPTION OF SPECIES

Clambus bipartitus spec. nov.

Very similar and closely related to *C. pilosellus* Reitter that was found sympatric with this new species. Apparently the only, but constant differences between these species are the straight lateral margin of pronotum in *C. bipartitus* that is concave in *C. pilosellus*; and the sharp angular preapical hook of the penis that is absent in *C. pilosellus*.

Whole surface evenly and very distinctly pubescent, hairs moderately long, densely set, recumbent and shiny yellow. Lateral angle of head in level with posterior portion of eye. Lateral margin of pronotum straight. Posterior two third of elytra finely but distinctly punctate. Metasternum long in middle. Median lobe of aedeagus bipartite. Dark reddish brown, head and disc of pronotum darker.

Head moderately convex. Genal margin alongside eye straight, posterior angle rectangular, apex broadly rounded and situated in level with the posterior quarter of eye. Eye broadly ovate but with posterior angle sharp. — Pronotum moderately convex; anterior lateral angle roundedly rectangular; lateral margin straight in an anterior section (fig. 1A); posterior lateral angle slightly obtuse-angled and broader rounded than the anterior. Disc of head and pronotum shiny with a faint trace of shagreen. Orientation of hairs star-like with the centre in the middle of pronotal disc. — Elytra longer than combined breadth (27: 24). Transversally evenly convex between vertical lateral margins. Sutural profile evenly and moderately convex, it joins lateral margin at a sharp angle posteriorly. Sutural margin briefly depressed posteriorly in lateral view. Each elytron with a small but distinct nodule in front of apex. Disc shiny and smooth anteriorly but basal punctures of hairs well discernible in posterior two third or three quarter (laterally). Hairs longer than distance between their insertions, directed from front to back. — Metasternum about as long in middle as half of its lateral length. Anterior margination even, only slightly elevated, not sharply crested. Surface indistinctly shagreened with distinct basal punctures of hairs. Coxal plate shiny and smooth basally, finely but clearly shagreened in posterior three quarter, here also pubescent with basal punctures of hairs. Sculpture and pubescence of sternites similar but punctation finer. Apex of apical sternite with a patch of denser set short hairs. — Legs and antennae light brown. Antennal segments 7 and 8 (last funicular segments) as broad as long and 6th also only slightly longer than broad. — Aedeagus of an unusual bipartite structure, only known in this species and in *C. pilosellus* in the family. Median lobe (penis) is joined by an almost equal size, apparently articulate plate in a latero-dorsal position on the left side of the penis as positioned in the body. It is latero-ventral on the left side as usually mounted and depicted. The homology of this plate is unknown. Penis with a sharply pointed apico-lateral process. Accessory plate sharply pointed. Fused parameres asymmetrically emarginate at apex (fig. 1D-F). Length of aedeagus 0.45 mm of which free standing portion of penis 0.18 mm, and that of the accessory plate 0.16 mm. Breadth of penis 0.05 mm and that of the accessory plate 0.03 mm.

♀: similar to male, only 8th segment of antenna slightly broader than long.

Length: 1.5 mm, breadth: 0.9 mm.

Distribution: known only from the southern slopes of the Himalaya in Kosi District of eastern Nepal.

H o l o t y p e ♂, allotype ♀ (MHNG) and 10 paratypes: E Nepal, Kosi, Valley Induwa Kola, 2000-2600 m, 16-18.IV.1984, Löbl-Smetana. Further paratypes: idem, but 2000 m, with dates: 2,14.IV.1984; 2,16.IV.1984; 1,18.IV.1984; 2 idem, but 2050 m, 17.IV.1984; 3 idem, but 2 km E Mangsingma, 1900 m, 19.IV.1984.

The species, together with *C. pilosellus* Reitter key out to *C. ruber* Endrödy-Younga at thesis 10 in the key of Oriental species (ENDRÖDY-YOUNGA, 1986: 100). *C. ruber* differs from *C. bipartitus* and *C. pilosellus* in its smaller size of 1.2 mm, even less arcuated sutural profile of elytra; impunctate horizontal plate of metasternum, even and dome-shape eye; much broader than long 8th segment of antenna; and in its non-bipartite aedeagus with simple, narrowly lanceolate penis.

Derivatio nominis: bipartitus, -a, -um, Latin adjective meaning composed of two parts refering to the structure of the aedeagus.

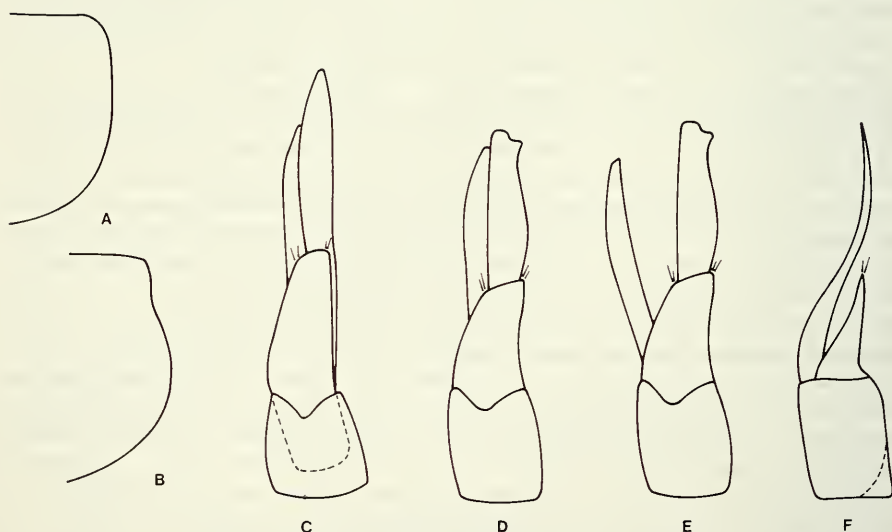


FIG. 1.

A = Straight lateral margin of pronotum in *Clambus bipartitus* spec. nov. B = Emarginate lateral margin of pronotum in *C. pilosellus* Reitter. C-F = aedeagi in *Clambus* species. C = *C. pilosellus* Reitter, ventral view. D-F = *C. bipartitus* spec. nov. D = ventral view with closed median lobes. E = idem, with accessory plate moved apart. F = idem in lateral view.

Clambus pilosellus Reitter

Clambus pilosellus Reitter, 1876: 282. — ENDRÖDY-YOUNGA, 1960: 286; 1986: 93.

Very similar to *C. bipartitus* spec. nov. from which it only differs in two characters. All other characters were found to be similar as described in *C. bipartitus*.

Lateral margin of pronotum emarginate behind anterior lateral angle so that its profile is concave in lateral view (fig. 1B). — Penis of bipartite aedeagus evenly tapering to narrow, almost pointed, asymmetrically truncate apex (fig. 1C). Length of aedeagus 0.52 mm, from which free standing portion of penis 0.22 mm and that of the accessory plate 0.16 mm.

Length 1.4 mm, breadth: 0.92 mm.

Distribution: from southeastern Central Europe to the Caucasus and the Caspian area, Taiwan and eastern Nepal, where it was found recently, sympatric with *C. bipartitus* spec. nov.

Material from Nepal examined: 8♂ and 22♀, all from the collection of Mus. Genève.

Clambus loeblianus spec. nov.

Both dorsal and ventral surfaces evenly clothed by moderately long recumbent silky pubescence. Elytra, except of peri-scutellar area with distinct basal punctures of hairs. Sharp lateral angle of head in level with posterior section of eye. Posterior, horizontal plate of metasternum only slightly less than half of lateral length in middle. Aedeagus of symmetrical but highly unusual shape. Chestnut brown, head and disc of pronotum black.

Head moderately convex, clypeus broadly arcuate. Genal margin alongside eye straight, anterior angle slightly, posterior one somewhat more obtuse, but both more or less 110°. Angles almost pointed, only apices narrowly rounded. Posterior angle situated in level with posterior third of eye. Eye regular dome shaped triangular with broadly arcuate angle towards the disc of head. Integument shiny, basal punctures of hairs indistinct. Pubescence uniform and similar as on the rest of the dorsal surface, hairs are directed forward and axillary. — Pronotum moderately convex, anterior lateral angle narrowly, posterior one very broadly arcuate. A short section of lateral margin straight behind anterior lateral angle. Integument glossy, basal punctures of hairs indistinct. Direction of recumbent hairs radiate from the middle of disc. — Elytra evenly ovate, longer than combined breadth (24: 20). Sutural profile flatly arcuate from behind scutellum, turned ventrad briefly before apex. Integument smooth and shiny around scutellum. Basal punctures of hairs distinct all along lateral portion and behind first quarter of length on the disc. They become gradually stronger towards apex where punctation is coarse. Pubescence fine and silky, shiny yellow. Recumbent hairs longer than distance between their insertions, hardly elevated from surface. — Posterior, horizontal plate of metasternum only slightly shorter in middle than half of its lateral length (10: 24). Transversal crest moderately elevated, crest gradually broadening towards middle. Integument shagreened but punctation indistinct, posterior edge finely reticulate. Coxal plates even coarser shagreened with more apparent punctation. Pubescence of whole ventral surface uniform, hairs somewhat finer than on the dorsal surface. — Legs and antennae light brown. Apical funicular segments of antenna short. The 8th distinctly broader than long; 7th as broad as long, 6th only slightly longer than broad. — Aedeagus of symmetric type. Penis broad and parallel-sided with slight preapical contraction. Apex truncate and emarginate; straight in lateral view; double longitudinal lines (probably the reflexion of ductus ejaculatorius) slightly asymmetric. Fused paramers emarginatedly truncate at apex,

left hand side angle (as depicted) slightly more produced (fig. 2A, B). Length of aedeagus 0.40 mm from which free standing portion of penis is 0.14 mm, breadth of penis 0.065 mm at base and also at apex.

♀: Unknown.

Length: 1.35 mm with head somewhat stretched; breadth: 0.84 mm.

Distribution: only known from Nepal.

H o l o t y p e ♂: Nepal, Manang Distr., 4 km SE Pisang, 3050 m, 26.IV.1983, Smetana & Löbl (MHNG).

This species keys out to *C. ruber* Endrödy-Younga at the thesis 10 in the key of Oriental species (ENDRÖDY-YOUNGA, 1986: 100). It differs from *C. ruber* in its entirely different aedeagus, slightly larger size (*C. ruber* 1.15 mm); darker colour particularly that of head and disc of pronotum. From *C. bipartitus* and *C. pilosellus* by the non-bipartite aedeagus, regular shape of eye, and flattened sutural profile of elytra.

Probably the most closely related species to *C. loeblianus* is *C. klapperichi* Endrödy-Younga (1986: 95) from Taiwan. Their close relation is marked by the similar basic structure of the penis which is contracted before broad and emarginate apex. Clypeus of *C. klapperichi* is narrower arcuate with a breadth-length ratio measured between lateral angles and from the line between them being 62: 21. The same ratio in *C. loeblianus* is 53: 20. Correspondingly the transverse crest of metasternum is higher arched (to fit to the clypeus in a rolled up position) in *klapperichi*. Lateral angle of head is nearer to rectangular in *C. klapperichi*, about 100°, whereas in *C. loeblianus* about 110°.

Derivatio nominis: This species is named in honour of my dear friend Dr. Ivan Löbl who is the most productive collector of clambids.

Clambus thai spec. nov.

Very small broadly ovate, dorsal surface with few very long and semierect setae. Lateral angle of head in level with posterior portion of eye. Elytra with faint median transversal impression. Posterior, horizontal plate of metasternum hardly reduced in middle, here transversally impressed, sharply elevated transverse crest with long setae. Aedeagus small, narrow, spiciform. Dark reddish brown.

Head broad, convex, clypeus strongly inclined anteriorly. Genal margin arcuate alongside the eye. Posterior angle obtuse (about 110°), its apex rounded and situated behind middle of eye. Eye large, almost regularly circular, dark and barely visible in its dark surrounding. Integument with very indistinct shagreen that barely brakes the polished sheen of the surface. Disc with few very long setae, and scattered barely visible, fine and short surface-leaning hairs. Dense setation of clypeal margin half as long as erect setae. — Pronotum transversally very convex, lateral lobes almost vertical. Anterior lateral angle obtuse (about 110°), broadly rounded; posterior angle about rectangular, slightly narrower rounded. Integument similar as that of the head, surface only with the very fine hairs and a pair of the very long, vertically erect setae, in median position in the posterior quarter of pronotal length. — Elytra almost as broad as long (15: 17); lateral margins straight and parallel behind humeri, arcuate to angular apex from about middle of length. Sutural profile convex in the scutellar and apical sections, flattened in the median half, apical section almost vertical. A subsutural furrow appears in front of anterior quarter of length, the furrow deepest in middle, draws closer to suture behind and disappears before apex. Disc with faint transverse impression just behind middle of length. Integument shiny, apparently without the very fine hairs but with few (less than

30 per elytra) very long and erect setae that are almost as long as head. Basal punctures of hairs indistinctly small. — Posterior horizontal plate of metasternum moderately reduced in middle, here more than half of lateral length (11: 19). Transversal crest sharp and considerably elevated in middle. Plate angularly impressed in middle across whole breadth. A single set of long setae originate from the transversal crest, surface beneath setae covered by a crust of whitish substance. Setae as long as the plate itself. Coxal plates shiny with scattered semierect setae that are shorter and finer than those of metasternum. Sternites with long leaning setae. — Legs and antennae yellow, last and penultimate funicular segments of latter about as long as broad, two preceding segments only moderately longer than broad. — Aedeagus very narrow, spiciform, both, penis and fused parameres evenly and sharply pointed. Penis parallel-sided and straight but slightly bent towards parameres basally from middle (fig. 2C, D). Length 0.29 mm from which free apical portion of penis 0.12 mm. Breadth of penis 0.02 mm at apex of parameres, the latter at base 0.04 mm.

♀: including antennae similar to males.

Length: 0.85-1.00 mm; breadth 0.60-0.65 mm.

H o l o t y p e ♂, allotype ♀ (MHNG) and 197 paratypes: Thailand, Chantabury, Khao Sabap Nat. Park, 150-300 m, 23-24.XI.1985, Burckhardt-Löbl. Further paratypes: 4♂, 5♀ Thailand, Doi Inthanon, 1650 m, 7.XI.1985, Burckhardt-Löbl; 2♂, 5♀ Thailand, Chiang Mai, Doi Suthep, 1050 m, 5.XI.1985, Burckhardt-Löbl; 1♀ idem, but 1400 m; 1♂, 2♀ idem, but 1450 m, 4.XI.1985.

Derivatio nominis. Named as the inhabitants of the country of the species origin.

C. thai keys out in the key of the Oriental species (ENDRÖDY-YOUNGA, 1987: 102) at thesis 40 to *C. ceylonicus* Endrödy-Younga, 1978. The horizontal section of metasternum is considerably more reduced in middle in *C. ceylonicus*, here only less than half of the lateral length. The semierect setae of elytra hardly longer than diameter of eye in *C. ceylonicus*, whereas more than twice longer in *C. thai*.

***Clambus burckhardti* spec. nov.**

Very small. Dorsal and ventral surfaces with extremely fine hairs, seemingly bare. Lateral angle of head in level with posterior margin of eye. Lateral margin of pronotum emarginate behind anterior angle. Elytra with a small median patch of distinct punctures and with a small surface elevation behind punctures. Anterior plate of metasternum in an unusual, perfectly vertical position. Posterior plate transversally convex anteriorly, moderately reduced in the middle; transversal crest hardly elevated but dilate in middle; posterior edge of the plate punctate-marginate. Penis of asymmetric type. Reddish brown.

Head broad, as broad across lateral angles as pronotum across its anterior lateral angles. Disc convex, clypeus broadly arcuate between lateral angles. Genal margin straight alongside the eye, slightly bending to lateral angle. Angle between antennal fossa and genal margin slightly obtuse-angled, apex of angle narrowly rounded. Posterior angle in level with posterior section of eye, almost rectangular (about 100°), both, genal and post-angular margins slightly turning into the angle, thus lateral angle not as sharp as that of antennal furrow. Eye large, slightly transverse (8: 7) almost circular. Integument smooth with scattered and hardly discernible fine and short, surface-leaning hairs between eyes, that are only slightly longer on the clypeal area. — Pronotum broad, moderately convex transversally. Anterior lateral angle obtuse (about 105°), angle narrowly rounded but not nearly sharp. Posterior angle rectangular with basal margin bent into angle, that is still rather narrowly rounded. Lateral edge emarginate behind anterior angle. Integument

smooth only with scattered and extremely fine hairs, basal punctures indiscernible. — Elytra as broad as long (64: 65), lateral margins evenly arcuate to rounded apex. Sutural profile rather flatly arcuate, flattened in median section, turning steeper towards acute-angled (about 75°) sutural angle in posterior third of length. Integument smooth with scattered extremely fine hairs similar to those on the pronotum. In the middle of the disc there is a horizontal Y shape impression of which the posteriorly positioned side arm is deeply incised. The main arm turns parallel to suture and becomes a broad but shallow impression. The area between lateral arms is punctured and has a smooth slight elevation behind the posterior transversal incision. The surface structure of this discal patch resembles a scar and was not observed in any other species of the family. — Ventral side also smooth and shiny at most with the scattered microscopic hairs. Anterior portion of metasternum almost perfectly vertical, not steeply slanting towards mesosternum. Posterior, horizontal plate of metasternum moderately reduced in middle, about two-and-a-half times longer laterally (7: 18). The plate is transversally much more convex anteriorly than posteriorly. Anterior transversal crest of the plate moderately elevated, narrow laterally, gradually broadening towards middle, where it occupies about a third of the plates length. Posterior margin of the plate is not smooth as usually but has short but distinct surface incisions perpendicular to the margin; there are about 25 incisions in the whole breadth of the metasternal posterior margin. Coxal plates hyaline with smooth and shiny integument. Sternites smooth and shiny only with microscopic hairs and a fine tuft of hairs at the apex of the anal sternite. — Legs and particularly antennae hyaline, reddish

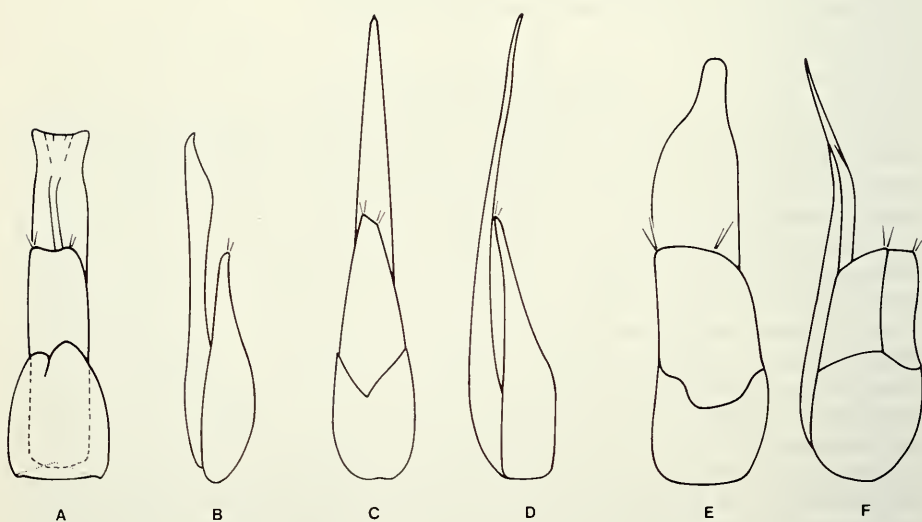


FIG. 2.

Aedeagi of *Clambus* species, alternately in ventral and in lateral views. A-B = *C. loeblianus* spec. nov. C-D = *C. thai* spec. nov. E-F = *C. burckhardti* spec. nov.

yellow. Last funicular segment of the antenna very slightly broader than long, penultimate (7th segment) narrower and slightly elongate. — Aedeagus of asymmetric type. It is 0.34 mm long of which free standing portion of penis 0.15 mm. Breadth of penis at apex of paramers 0.07 mm, and of its apical process 0.03 mm. Fused paramers 0.09 mm broad (fig. 2E-F).

♀ similar to male.

Length 0.90-0.95 mm; breadth 0.65 mm.

H o l o t y p e ♂, allotype ♀ (MHNG) and 19 paratypes: Thailand, Chanthaburi, Khao Sabap Nat. Park, 150-300 m, 23-24.XI.1985, Burckhardt-Löbl. 3 further paratypes: Thailand, Chiang Mai, Doi Suthep, 1450 m, 4.XI.1985, Burckhardt-Löbl.

C. burckhardti differs from all known species by its characteristic discal sculpture of elytra.

Derivatio nominis: This new species is named in honour of my friend Dr. Daniel Burckhardt of Muséum d'Histoire naturelle, Genève.

***Clambus borneensis* spec. nov.**

Small, convex, smooth and shiny, only lateral portions of horizontal plate of metasternum coarsely pubescent. Lateral angle of head in level with posterior third of eye. Posterior, horizontal plate of metasternum not conspicuously short in middle, slightly impressed transversally in whole breadth, impression broadens to whole length of plate laterally; there coarsely pubescent and distinctly punctate. Coxal plate smooth. Sternites smooth with fine transversal shagreen. Anal sternite coarsely and irregularly shagreened and densely clothed with short and fine hairs. Aedeagus of asymmetric type, penis filiform, bent laterally. Darker or lighter reddish brown.

Head broad, moderately convex. Genal margin straight alongside eye. Lateral angle slightly obtuse (about 100°). Margins slightly bent towards apex of lateral angle, thus angle is not sharp but rounded. Eye rather large on dorsal surface, regular triangular with rounded corners and bent sides. Integument smooth and very shiny, long and very fine hairs of clypeus inconspicuous. Few long hairs close to clypeal margin almost as long as diameter of eye, those in a more caudal position much shorter, all almost adherent to surface and without appreciable basal punctures. — Pronotum evenly convex, much narrower between anterior than between posterior lateral angles, thus anterior lateral angle obtuse (about 120°), the posterior angle rectangular, former much narrower rounded than latter; lateral margin between angles straight. Integument smooth and shiny with scattered minute hairs that emerge from microscopic basal punctures. — Elytra slightly longer than combined breadth (22: 20), ovate in dorsal view, margins evenly arcuate. Sutural profile moderately convex, almost evenly arcuate, only very slightly flattened in its median section; apical angle in lateral view about 60°. Integument smooth and shiny, scattered hairs as on pronotum inconspicuously short and fine, basal punctures only in the very apex better visible. — Posterior, horizontal plate of metasternum moderately reduced in middle, here not quite one third of its lateral length (8: 21). Anterior transversal margin sharp, evenly narrow and only moderately elevated. The plate is very slightly concave in middle, distinctly concave and flattened in the lateral one thirds of breadth. Integument shiny and smooth with few inconspicuous hairs in median one third. Coarsely pubescent in lateral portions, hairs here long, rather strong and recumbent, they emerge from the whole length of the surface, not only from the transversal crest. Basal punctures of hairs here very distinct. Coxal plates smooth and shiny with scattered, fine and long hairs, similar to those

of the clypeal margin. Exposed sternites one to four shiny with distinctly transverse shagreen, pubescence scattered and very fine. Anal sternite coarsely and irregularly shagreened with broken sheen, with a congregation of fine but well visible hairs in the mid-apical section. — All antennal segments longer than broad. Segments 6, 7 and 8 gradually shortening, 8th slightly broader than 7th. Two club segments also elongate. Aedeagus simple and asymmetric. Penis narrow, filiform and laterally bent, parameres completely fused, broad (fig. 3A-B). Length 0.44 mm, from which free standing apical portion of penis 0.14 mm. Penis 0.03 mm and parameres at base 0.09 mm broad. The breadth of the penis shows in this species an unusual variation. While the shape remains constant the breadth varies between 0.03 and 0.05 mm.

♀: Antennal segments 8 to 10 somewhat shorter, 8th triangular, as long as broad, club segments also less elongate.

Length: 1.10-1.25 mm, breadth: 0.75-0.85 mm.

H o l o t y p e ♂, allotype ♀ (MHNG) and 11 paratypes: Borneo, Sabah Mt., Kinabalu Nat. Pk., HQ. 1560-1660 m, 24.IV.1987, A. Smetana. Further paratypes: 1 idem, but 1500 m, 21.V.1987, and 1 idem but 25.IV.1987.

Derivatio nominis: named after the land of its origin.

C. borneensis keys out in the key of the Oriental species (ENDRÖDY-YOUNGA, 1986: 100) to *C. wittmeri* Endrödy-Younga, though the two species are not closely related. Lateral margin of pronotum about as long as genal margin in *C. wittmeri*, whereas one-and-a-half longer in *C. borneensis*. Ventral surface of the latter only extremely finely pubescent, whereas set with long and strong hairs in *C. borneensis*.

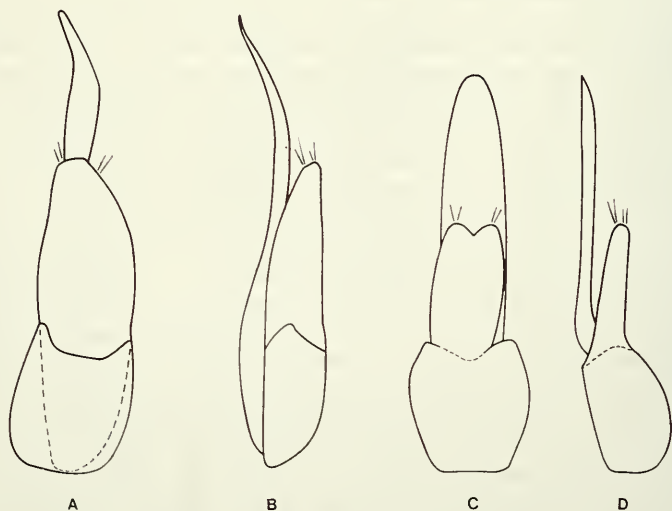


FIG. 3.

Aedeagi of *Clambus* species, alternately in ventral and in lateral views. A-B = *C. borneensis* spec. nov. C-D = *C. szentivanyi* spec. nov.

***Clambus szentivanyi* spec. nov.**

Small, reddish brown. Pubescence scattered, extremely fine and short, well comparable with that of the Palaearctic *C. punctulum* Beck. Lateral angle of head flatly rounded almost truncate, its posterior angle in level with posterior margin of eye. Horizontal plate of metasternum moderately reduced in middle. Aedeagus of symmetric type with broad penis.

Head convex, clypeal margin broadly arcuate between lateral angles of head. Genal margin alongside of eye straight from front to rounded lateral angle. Lateral angle broadly rounded, sometimes slightly flattened in middle of curvature. Rounded apex in level with posterior third of eye and turns into the collar margin in level with posterior margin of eye. Eye broad triangular with rounded apices. Integument smooth, basal punctures of hairs very fine. Pubescence semierect, as short as on pronotum and elytra, denser on clypeus than between eyes. — Pronotum convex but lateral lobes not nearly vertical. Anterior lateral angle almost rectangular (about 100°), apex rather narrowly rounded. Posterior angle broadly rounded, lateral margin straight in a section behind anterior angle. Integument smooth, scattered hairs short fine and shiny. — Elytra almost as broad as long (68: 72). Lateral margins evenly arcuate in dorsal view; sutural profile moderately convex, very slightly flattened in the median section. Integument smooth but with a trace of indistinct shagreen. Basal punctures of hairs very fine anteriorly but very distinct without being coarse in the posterior third of length. Pubescence similar as on pronotum. — Posterior, horizontal plate of metasternum moderately reduced in middle, here almost half of its lateral length (8: 19). Anterior transversal crest only slightly elevated, evenly broad. The plate itself even, without an impression, flattened in middle, transversally convex laterally and particularly to its anterior lateral angle. Integument smooth, even hairs somewhat longer, softer and less erect than those of elytra; basal punctures of hairs fine. Coxal plates hyaline, finely shagreened and distinctly punctate, pubescence similar as on metasternum. Sternites transversely shagreened and with similar pubescence as rest of ventral surface. — Legs and antennae yellow and transparent. Antennal segment 6 elongate, 7 about as broad as long, 8 much broader than long, triangular. — Aedeagus symmetric, 0.23 mm long, from which free standing portion of penis 0.09 mm. Breadth of penis and parameres 0.04 mm (fig. 3C-D).

♀: similar to males.

Length 1.0-1.1 mm; breadth 0.68 mm.

H o l o t y p e ♂ and allotype ♀: New Guinea, NE, Wau, Mt. Kumbak, 27-28.IX.1968, leg. Dr. J. Balogh (NHMB). Further paratypes: All from New Guinea, NE, Wau and collected by Dr. J. Balogh: 3 Eddy Creek, 2050 m, 30.VIII.1968; 1 Kilolo Creek, 26.VIII.1968; 1 idem but with 1000 m and 31.VIII.1986, 1 McAdam Park, 29.VIII.1968; 1 Mt. Wilhelm, 3900 m, 13-24.IX.1986; 1 only with New Guinea, NE, Wau, leg Dr. J. Balogh (latter label in hand).

C. szentivanyi differs from all known New Guinean species by the distinct punctuation of the elytral apical section. This punctuation is combined in this species with extremely fine pubescence. The fine hairs are also much shorter than the distance between their insertion on the elytra. By this combination of punctuation and pubescence it is different from all Oriental species too.

Derivatio nominis: This species is named in the honour of my recently deceased friend Dr. Josef Szent-Ivány the eminent researcher of the New Guineau entomo-fauna.

ACKNOWLEDGEMENTS

I am indebted to Dr. Ivan Löbl of the Natural History Museum, Geneva, entrusting me with the study of the bulk of this material and to his colleagues Dr. Claude Besuchet and Dr. Daniel Burckhardt who participated in the collecting of it. Also to the late Dr. Z. Kaszab of the Natural History Museum, Budapest, who sent me the New Guinean specimens for identification.

REFERENCES

- ENDRÖDY-YOUNGA, S. 1959. Systematischer Überblick über die Familie Clambidae (Col.). *Opusc. Ent. (Lund)*, **24**: 81-116.
- 1960. Monographie der Paläarktischen Arten der Gattung *Clambus* (Coleoptera, Clambidae). *Acta Zool. Acad. sci. Hung.*, **6**: 257-303.
- 1978. A revision of the Oriental Clambidae with reference to Papuan and Hawaii species (Coleoptera: Staphylinoidea). *Pacific Insects*, **18**: 67-84.
- 1986. New species and new records for the Palaearctic and Oriental faunas of the family Clambidae (Coleoptera, Eucinetoidae). *Revue suisse Zool.*, **93**: 89-115.
- MULSANT, E. and C. REY. 1861. Opuscules entomologiques. Vol. **12**: 1-196.
- REITTER, E. 1876. Neue transkaukasische Coleopteren, gesammelt von Hans Leder. *Deut. ent. Zeit.* **20**: 289-294.
- 1884. Necrophaga (Platypsillidae, Leptinidae, Silphidae, Anisotomidae und Clambidae). *Verh. nat. Ver. Brünn*, **23**: 3-122.